

5    **WHAT IS CLAIMED IS:**

1.        A method of traffic measurement collection in a telecommunication network of interconnected nodes arranged to provide connection between network resources, said method comprising:

             comparing a message unit rate on a monitored communication linkset  
10    at a network node to a predetermined overload threshold    ;

             if said unit rate exceeds said overload threshold, identifying communication linksets which provide traffic to said monitored communication linkset; and

             for each of said identified communication linksets, incrementing a  
15    count element for each message unit received on respective identified communication linksets.

2.        The method of Claim 1 further comprising comparing said message unit rate on said monitored communication linkset to a predetermined underload threshold and terminating traffic measurement collection if said underload threshold  
20    exceeds said message unit rate.

3.        The method of Claim 2 further comprising providing an indicator upon terminating of traffic measurement collection.

5           4.       The method of Claim 1 further comprising providing an indicator  
upon commencement of traffic measurement collection.

5.       The method of Claim 1 further comprising providing a traffic  
measurement report including said incremented count element for said respective  
identified communication linksets.

10          6.       The method of Claim 1 wherein said network node is a signaling  
transfer point.

7.       The method of Claim 1 further comprising limiting traffic  
measurement collection to a predetermined maximum period.

5           8.     A method for traffic measurement collection in a telecommunication network of interconnected nodes, said method comprising:

                  comparing a message unit rate on each of a first set of monitored communication linksets at a network node to a respective predetermined overload threshold;

10               if said message unit rate on one of said monitored communication linksets exceeds said overload threshold, identifying communication linksets which are providing traffic to said one monitored communication linkset; and

                  for each of said identified communication linksets, incrementing a count element for each message unit received on respective identified  
15     communication linksets.

                  9.     The method of Claim 8 further comprising selecting a second set of monitored communication linksets at said network node for traffic measurement collection, comprising:

                  for each of said second set of monitored communication linksets,  
20     examining outgoing message units for determining communication linksets associated with said outgoing message units; and

5                   for each of said determined communication linksets, incrementing a  
count element for each message unit received on respective determined  
communication linksets.

10           10.     The method of Claim 8 further comprising comparing said message  
unit rate on one of said second set of monitored communication linksets to a  
predetermined underload threshold and terminating traffic measurement collection  
for said one monitored communication linkset if said underload threshold exceeds  
said message unit rate of said one outgoing linkset.

15           11.     The method of Claim 8 further providing a traffic measurement report  
including said incremented count element for each of said respective identified  
communication linksets.

12.     The method of Claim 8 wherein said network node is a signaling  
transfer point.

- 5           13. An apparatus for traffic measurement collection in a telecommunication network of interconnected nodes, said apparatus comprising:
- a monitor having an input for receiving message units for transmission on a monitored communication linkset of a network node and operable to determine a message unit rate for said monitored communication linkset, said
- 10   monitor operable for comparing said message unit rate to a predetermined overload threshold, said monitor further having an output for transmitting a first indicator for commencing said traffic measurement collection upon detecting that said message unit rate exceeds said overload threshold;
- an examiner having an input coupled to said monitor for receiving
- 15   said first indicator, said examiner responsive to said first indicator for identifying communication linksets which provide traffic to said monitored communication linkset; and
- a counter coupled to said examiner for receiving therefrom information indicative of said identified communication linksets, said counter
- 20   operable, for each respective identified communication linkset, to increment a count element for each message unit received.

5           14.    The apparatus of Claim 13, wherein said monitor is further operable  
to compare said message unit rate to a predetermined underload threshold and  
transmit a second indicator for terminating said traffic measurement collection upon  
detecting that said underload threshold exceeds said message unit rate.

          15.    The apparatus of Claim 13, wherein said network node is a signaling  
10 transfer point.

          16.    The apparatus of Claim 13, wherein said network node comprises a  
plurality of monitored communication linkset.

          17.    The apparatus of Claim 13, wherein said examiner includes an input  
for permitting a user to direct said examiner to identify a communication linkset for  
15 traffic measurement collection for any message unit rate.

5           18.    A telecommunication network with traffic measurement collection capability comprising:

                  a plurality of interconnected network nodes, at least one of said network nodes having a plurality of communication linksets coupled to other network nodes; and

10                   a traffic measurement device coupled to said one network node, said traffic measurement device comprising:

                  a monitor having an input for receiving message units for transmission on said plurality of communication linksets and operable to determine a message unit rate for at least one of said communication linksets, said monitor operable for comparing said message unit rate to a predetermined overload threshold, said monitor further having an output for transmitting a first indicator for commencing said traffic measurement collection upon detecting that said message unit rate exceeds said overload threshold;

20                   an examiner having an input coupled to said monitor for receiving said first indicator, said examiner responsive to said first indicator for identifying incoming communication linksets which provide traffic to said at least one communication linkset; and

5           a counter coupled to said examiner for receiving therefrom  
information indicative of said identified communication linksets, said counter  
operable, for each of said identified communication linksets, to increment a  
count element for each message unit received.

10           19.   The telecommunication network of Claim 18, wherein said one  
network node is a signaling transfer point.

20.   The telecommunication network of Claim 18, wherein said examiner  
includes an input for permitting a user to direct said examiner to identify a  
communication linkset for traffic measurement collection for any message unit rate.